

REMARKS

Claims 1-11 are cancelled and new claims 12-19 are added. Support for new independent claim 12 can be found in claim 1 as originally filed, and in Examples 1 and 4 of the specification. Support for new claims 13-19 can be found in original claims 2-8, respectively. Claims 12-19 are presented for further examination.

The rejection of claims 4 and 8-11 under 35 U.S.C. § 112, first paragraph, for allegedly containing new matter has been rendered moot by the cancellation of these claims. Applicants note that the terminology “on a molecular level,” which was the basis for the new matter rejection, is not used in new claims 12-19.

The rejection of claims 1 and 4-11 under 35 U.S.C. § 103(a) over Doetsch, US 6,193,776 (“Doetsch”) in view of GB 1,580,248 (“GB ‘248”) and further in view of GB 1,575,792 (“GB ‘792”) has been rendered moot by the cancellation of these claims.

The invention relates to a homogeneous, boron-doped alkaline earth peroxide and a process for producing such a boron-doped peroxide. As recited by independent claim 12, the peroxide is required to have a boron content between 0.97 wt.% and 1.6 wt.%, and a peroxide content of about 75 wt.% or more, calculated with respect to the active oxygen content in the peroxide.

Applicants have surprisingly determined that an improvement in the stabilization of the alkaline earth peroxide can be achieved by limiting the boron content to the range of 0.97 to 1.6 wt.%. Specifically, while a boron content of 0.97 wt.% leads to a dry stability loss of 7% and a boron content of 1.6 wt.% leads to a dry stability loss of 4.4%, an intermediate boron content of 1.4 wt.% leads to an improved dry stability loss of only 2.9 wt.% (see, e.g., Tables 1 and 5 and Examples 1, 4 and 5).

The determination that the claimed range of boron doping is associated with an unexpected improvement in stabilization represents a signification, practical advantage as compared to doping concentrations outside of the claimed

range. A homogeneous, boron-doped alkaline earth peroxide having the required composition is not disclosed or suggested by any of the cited references.

Doetsch discloses a mixed calcium-magnesium peroxide that may include an inorganic peroxygen stabilizer such as commercial phosphonic acids but, as acknowledged in the Final Action, is completely silent as to the incorporation of boron, much the incorporation of boron in the range of 0.97 wt.% to 1.6 wt.%. This deficiency of Doetsch is not remedied by either secondary reference.

GB '248 teaches a process for coating beet seed using a coating agent comprising calcium peroxide and other optional additives, which may include boron derivatives (page 1, lines 18-32 and page 2, lines 12-17). GB '248 discloses that the various optional additives (which in addition to the boron derivatives may include fertilisers, fungicides, insecticides, and agents that protect against herbicides) can be comprise from 0 to 10 wt.% of the coating agent. GB '248 teaches that the boron derivatives, if used, may improve the quality of the coated beet. However, even if a boron derivative was selected from among the list of optional additives, GB '248 does not teach to limit the boron content to the claimed range of 0.97 wt.% to 1.6 wt.% nor does GB '248 provide any motivation to do so.

GB '792 relates to a process for stabilizing particles of peroxygenated compounds (see, e.g., page 1, lines 9-14 and page 3, lines 100-101). GB '792 teaches that the particles can be stabilized by coating them with a solid coating agent containing at least one boric compound (page 1, lines 85-89 and page 2, lines 1-9 and 94-130). Specifically, GB '792 teaches that the quantity of boric compound used in the coating agent is generally between 30 and 100 wt.%, and that that quantity of solid coating agent corresponds to 0.5 to 20 wt.% in relation to the weight of the peroxygenated compound to be coated. Thus, GB '792 teaches that the boric compound can comprise from 0.15 to 20 wt.% relative to the peroxygenated compound. As with GB '248, however, GB '792 does not teach or suggest to limit the boron content to the claimed range of 0.97 wt.% to 1.6

wt.% or provide instruction to a skilled artisan that any advantage is associated with the claimed range.

Even assuming *arguendo* that a proper *prima facie* case of obviousness could be made out with respect to the claimed range of boron doping, it would be effectively rebutted by the unexpected results achieved vis-à-vis the improved stabilization properties obtained over the claimed range. See *In re Margolis*, 228 USPQ 940 (Fed. Cir. 1986). Not only are surprisingly advantageous results achieved by the inventive doping compositions, but they could not have been predicted based on the known characteristics of the prior art.

As noted above, Doetsch is completely silent as to any boron doping and GB '248 merely teaches that optional boron derivatives may improve the quality of the coated beet. And while GB '792 relates to a process for stabilizing particles of peroxygenated compounds, the process of GB '792 relates to applying a protective coating to the particles, and not to the homogeneous incorporation of boron throughout an alkaline earth peroxide.

As pointed out in the Reply filed on June 21, 2007, stabilization of alkaline earth peroxides by applying a coating to the particles is fundamentally different from stabilization achieved via the distribution of boron throughout the alkaline earth peroxide. Because of this fundamental difference, a skilled artisan would have no reason to believe that a boron concentration suitable for a stabilizing coating would be effective as a homogenous dopant through the alkaline earth peroxide.

In view of the foregoing, the application is respectfully submitted to be in condition for allowance, and prompt favorable action thereon is earnestly solicited.

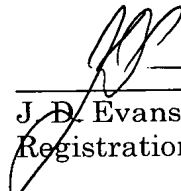
If there are any questions regarding this amendment or the application in general, a telephone call to the undersigned at (202) 624-2845 would be appreciated since this should expedite the prosecution of the application for all concerned.

October 31, 2007

If necessary to effect a timely response, this paper should be considered as a petition for an Extension of Time sufficient to effect a timely response, and please charge any deficiency in fees or credit any overpayments to Deposit Account No. 05-1323 (Docket #101771.53046US).

Respectfully submitted,

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